

CLAIMS

I claim:

- 1 1. A heat insulated wall structure for positioning between an interior heat controlled
2 space of a building structure and an outside environment adjacent the building structure,
3 comprising:
4 a series of spaced parallel support members,
5 an exterior wall applied to said spaced parallel support members and positioned
6 between said spaced parallel support members and the outside environment,
7 a layer of radiant heat insulation placed between adjacent ones of said parallel
8 support members in overlying relationship with respect to said exterior wall and positioned
9 between said exterior wall and the interior heat controlled space,
10 said layer of radiant heat insulation comprising a pair of superposed support sheets
11 having formed there between an array of gas filled cells and a radiant heat reflective surface
12 positioned in said cells, forming a radiant heat reflective cell blanket,
13 whereby the radiant heat reflective surface is protected in said cell blanket from
14 accumulation of dust by the pair of superposed support sheets.

- 1 2. The heat insulated wall structure of claim 1, wherein said radiant heat reflective
2 surface is sheet metal foil positioned in said cells.

1 3. The heat insulated wall structure of claim 1, wherein said radiant heat reflective
 2 surface comprises at least one of said superposed support sheets bearing a heat reflective
 3 metalized surface.

1 4. The heat insulated wall structure of claim 1, wherein said radiant heat reflective
 2 surface comprises at least one of said superposed support sheets bearing opposed heat
 3 reflective metalized surfaces.

1 5. The heat insulated wall structure of claim 1, and further including and interior
 2 wall applied to said spaced parallel support members and positioned between said cell
 3 blanket and the temperature controlled space.

1 6. The heat insulated wall structure of claim 1, wherein said cells of said array of
 2 gas filled cells each have a perimeter seam formed in said pair of superposed support sheets
 3 that seal the cells between said support sheets, and said surfaces of radiant heat reflective
 4 material do not extend into said perimeter seam.

1 7. The heat insulated wall structure of claim 1, wherein said radiant heat reflective
 2 surfaces in said cells comprise a pair of superposed sheets of radiant heat reflective material,
 3 and means for maintaining said superposed sheets of radiant heat reflective material out of
 4 contact with each other.

1 8. The heat insulated wall structure of claim 1, wherein said gas filled cells are
2 hermetically sealed.

1 9. A radiant heat insulation blanket for reflecting heat comprising:
2 a pair of superposed support sheets of flexible material connected together with an
3 array of gas filled cells formed therein,
4 a radiant heat reflective surface positioned in said cells for reflecting radiant heat
5 away from said blanket,
6 so that the superposed support sheets protect the radiant heat reflective surface in
7 said cells from accumulation of dust and from contact with other objects.

1 10. The radiant heat insulation blanket of claim 9, wherein said radiant heat reflective
2 surface is formed of reflective metal foil.

1 11. The radiant heat insulation blanket of claim 9, wherein said pair of superposed
2 support sheets is translucent and said radiant heat reflective surface is formed of metal foil.

1 12. The radiant heat insulation blanket of claim 9, wherein said radiant heat reflective
2 surface comprises at least one of said superposed support sheets being heat reflective.

1 13. The radiant heat insulation blanket of claim 9, wherein said radiant heat reflective
2 surface comprises at least one of said superposed support sheets being formed with its
3 opposed surfaces heat reflective.

1 14. The radiant heat insulation blanket of claim 9, and further including a fiberglass heat
2 insulation blanket applied to said radiant heat insulation blanket.

1 15. The radiant heat insulation blanket of claim 9, and further including a board applied
2 to one of said support sheets.

1 16. The radiant heat insulation blanket of claim 9, wherein said cells are filled with a gas
2 selected from a group consisting of: carbon dioxide, nitrogen, argon, air, and freon.

1 17. The radiant heat insulation blanket of claim 9, wherein said radiant heat reflective
2 sheet is sized to extend less than the full breadth of the cells.

1 18. The radiant heat insulation blanket of claim 9, and further including resilient objects
2 placed in said cells for urging apart said pair of superposed support sheets of each cell.

1 19. A radiant heat insulation blanket for reflecting heat comprising:
2 a pair of superposed support sheets of flexible heat fusible material heat fused
3 together in an array of gas filled cells,
4 at least one of said support sheets including a heat reflective surface facing within
5 said cells for reflecting radiant heat,
6 so that the superposed support sheets protect the radiant heat reflective surface from
7 accumulation of dust and from contact with other objects.

1 20. The radiant heat insulation blanket of claim 19, wherein said radiant heat reflective
 2 surface is formed of materials selected from the group consisting of: metalized polyester,
 3 metalized polyethylene, metalized polyvinyl chloride, and metalized polypropylene.

1 21. The radiant heat insulation blanket of claim 19, wherein said pair of superposed
 2 support sheets is translucent and said radiant heat reflective surface is formed of metal.

1 22. The radiant heat insulation blanket of claim 19, and further including a fiberglass
 2 heat insulation blanket applied to one of said support sheets.

1 23. The radiant heat insulation blanket of claim 19, and further including a board applied
 2 to one of said support sheets.

1 24. The radiant heat insulation blanket of claim 19, wherein said cells are filled
 2 with a gas selected from the group consisting of: air, nitrogen, carbon dioxide, argon and
 3 freon..

1 25. The radiant heat insulation blanket of claim 19, wherein said radiant heat reflective
 2 sheets are sized to extend less than the full breadth of the cells.

1 26. The radiant heat insulation blanket of claim 19, and further including resilient objects
 2 placed in said cells for urging said pair of superposed support sheets apart.

1 27. A method of insulating a wall structure comprising:
 2 forming a cell blanket with a pair of superposed support sheets defining an array of
 3 gas-filled cells and a reflective surface in each of said cells,
 4 placing the cell blanket in a wall structure,
 5 reflecting radiant heat with the reflective surfaces from within the cells of the cell
 6 blanket,
 7 protecting the reflective surfaces from the accumulation of dirt, dust, fibers and
 8 vapor, and
 9 maintaining a gap adjacent the reflective surfaces to avoid engagement of the
 10 reflective surfaces by other objects.

1 28. The method of claim 27, wherein the step of protecting the reflective surfaces
 2 comprises hermetically sealing the cells about the reflective surfaces.

1 29. The method of claim 27, wherein the step of maintaining a gap adjacent the
 2 reflective surfaces comprises maintaining a gap inside the cells adjacent the reflective
 3 surfaces.